Title (en)

DISTRIBUTED ANTENNA ARRAY WITH CENTRALIZED DATA HUB FOR DETERMINING PRESENCE AND LOCATION OF RF TAGS

Title (de)

VERTEILTE ANTENNENGRUPPE MIT ZENTRALISIERTEM DATENVERTEILER ZUR BESTIMMUNG VON PRÄSENZ UND POSITION VON HF-MARKEN

Title (fr)

RESEAU D'ANTENNE DISTRIBUE A PASSERELLE CENTRALISEE D'ENTREE DE DONNEES POUR DETERMINER LA PRESENCE ET L'EMPLACEMENT DE REPERES RF

Publication

EP 1815406 A2 20070808 (EN)

Application

EP 05804354 A 20051018

Priority

- US 2005037138 W 20051018
- US 62527304 P 20041105

Abstract (en)

[origin: WO2006052386A2] A distributed antenna array with a centralized data hub for determining the presence and location of RF tags has been disclosed. This antenna array centralizes electronics and distributes the RF to zones in a facility to greatly reduce the expense of recurring components for monitoring RF tags. A single BRT/hub with multiple antennas attached to transmit and receive ports is used to cover an entire facility. Large facilities are covered by a small number of the BRT/hub combinations. The BRT/hub has transmit antennas coupled thereto, preferably by co-axial cable, that transmit signals to a portion or all of the RF tags and all or a portion of them modulate and reflect the RF signal to a particular receiving antenna. The receiving antenna then returns the RF signal with tag data to the BRT/hub, preferably by co-axial cable. Also disclosed is a RF backscatter tag that cleanly switches a resonant aperture antenna on and off, thereby greatly increasing the mark-to-space ratio of the backscatter data. This enables tags to be detected by the BRT at much greater distances.

IPC 8 full level

G06K 19/00 (2006.01)

CPC (source: EP)

H01Q 1/2216 (2013.01); **H01Q 1/38** (2013.01); **H01Q 15/0006** (2013.01); **H01Q 21/28** (2013.01)

Designated contracting state (EPC)

AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HU IE IS IT LI LT LU LV MC NL PL PT RO SE SI SK TR

DOCDB simple family (publication)

WO 2006052386 A2 20060518; **WO 2006052386 A3 20060727**; AU 2005305253 A1 20060518; CA 2586576 A1 20060518; CA 2586576 C 20140401; EP 1815406 A2 20070808; EP 1815406 A4 20090520

DOCDB simple family (application)

US 2005037138 W 20051018; AU 2005305253 A 20051018; CA 2586576 A 20051018; EP 05804354 A 20051018